



DYLAFLO-1 SYSTEM
for high-speed off-line printing
with IBM peripherals

Now, for the first time, users of computer systems can realize the increased production and cost savings of off-line printing, with IBM Printers.

DYLAFL0 makes it possible to relieve the computer of time-consuming printing chores, without the expense and complexity of additional expensive computing equipment, and their related software, to perform these tasks. With DYLAFL0, you have the flexibility to perform printing chores truly off-line, leaving the computer free to perform its processing functions.

With DYLAFL0, your computer need not be "print bound," and you still maintain the quality of the IBM 1403 high-speed printer, known as the standard of the industry. The unique chain/print mechanism of the 1403 (with readily interchangeable print chains) provides print quality that cannot be approached by any other printer available today.

DYLAFL0 provides the complete buffering and control functions necessary to interface the 1403 Printer and the IBM 2401 magnetic tape drive, completely independent of the central processing unit, the main memory or controllers that are associated with normal on-line system operations.

In a typical off-line application, the system will function as follows: A block of information, under the control of the DYLAFL0 unit, will read from a previously prepared tape into the DYLAFL0 buffer memory. Subsequently, the information in that memory

will be scanned for control information and transferred to a print line buffer in the DYLAFL0 unit, which will then cause the line to be printed and all necessary control functions carried out. The cycle is reinstated until all the information has been printed.

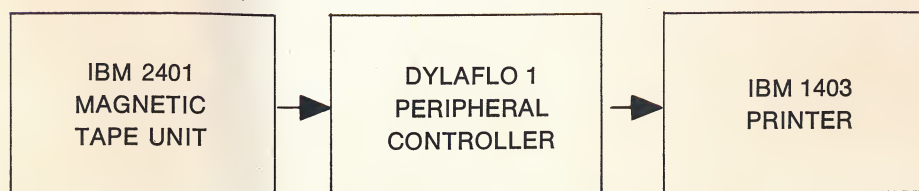
DYLAFL0, and its companion IBM equipment, is simple to operate, and personnel can be trained quickly and at minimal expense. In addition, operational transition can be accomplished without the type of conversion program that is generally associated with computer system changeovers. In most cases, installation of the DYLAFL0 unit, as well as operator training, can be accomplished in one day. Site preparation and installation are straightforward, and are accomplished with a minimum of disruption of normal operating procedures.

Go off-line with DYLAFL0

- Speeds to 1100 lines-per-minute
- Operator-changeable character sets, including upper and lower case.
- Relieves computer of time-consuming print chores.
- IBM customer engineering support for your peripherals.
- Optional on-line/off-line tape transport capability.
- Seven and nine track; 800 & 1600 bpi.
- 10-to-1 increase in computer utilization with off-line printing capability.



DYLAFL0 1 BASIC SYSTEM



“A rose
by any other name
would smell
as sweet...”

COMPUTERWORLD

March 25, 1970

Controller Enables Off-Line Use of IBM 1403 Printer

By Frank Piasta
CW Staff Writer

EL SEGUNDO, Calif. — A controller from Dataflo Business Machines Corp. will allow System 360 peripherals to be used for off-line high-speed printing, the company reported.

Able to interface any Model 2400 tape drive and any of the 1403 series of printers, the Dataflo-I is said to provide all buffering and control functions necessary, without tying up normal on-line operation of the central processing unit, main memory or associated controllers. An optional switch allows the 360 peripherals to be returned to 360 control.

According to Ray Lorenz, vice-president of engineering for Dataflo, “We feel that we will play a large part in unburdening

the processor from printing chores, and put the computer back to work computing.”

The Dataflo controller is said by the manufacturer to be simple to operate, and personnel can be trained quickly at minimal expense. In addition, it can be put into service quickly, Dataflo says.

In most cases, it is claimed, installation of the Dataflo unit as well as operator training can be accomplished in one day. Site preparation and installation are accomplished with a minimum of disruption of normal operating procedures, according to the company.

The basic Dataflo-I system has a 1,024-byte buffer, of which 767 bytes are usable for tape blocking. It has the capability to control either 7- or 9-track 800

bit/in. NRZI magnetic tape drives.

The printer is said to operate at its maximum speed, with three different printer chains available. Both the AN and HN alphanumeric 48-character chains can be accommodated, as can the SN upper and lower case, 84-character chain.

No software is required for the controller as all of the programming is hardwired into the controller. The tape records must be formatted so that the first character of each logical record is a format character for the controller. Space 1, 2, or 3 lines; go to channels 1 through 12; or space before or after printing may be specified. Each tape record contains one print line. Padding of records is not necessary as variable length records can be

accommodated.

Among options available for the Dataflo-I are a 4,096-byte buffer and the ability to control a 1,600 bit/in. tape drive. The 1,600-bit option precludes the use of 7-track drives.

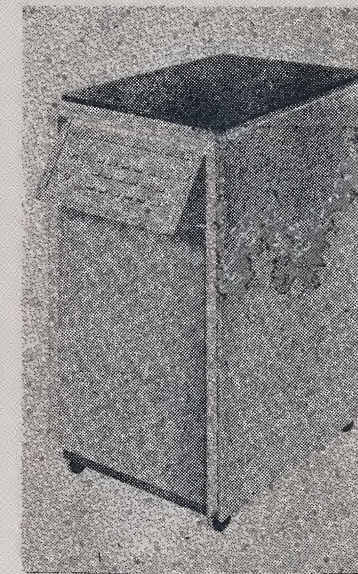
Another option allows tabulating across the print line, with up to six tab stops possible. A file-search forward and reverse option can bypass files on tape while searching for files to be printed.

The basic Dataflo-I sells for \$37,000, and rents for \$940/mo. Maintenance costs would amount to \$50/mo.

Rental prices for some of the options include: 4,096-byte buffer, \$110/mo; horizontal tab, \$50/mo; 1,600-bit/in. option,

\$115/mo; and on-line switch, \$45/mo.

The company is at 714 S. Douglas St.



Dataflo-I Controller

DATAFLO DYLAFL0

COMPUTERWORLD was right. But since this news item ran, we changed our name. Why? There are several reasons. There are just too many companies with names starting with “Data...” Sure, data is our business, but the dynamic off-line use of computer peripherals is *really* our business, and we feel that DYLAFL0 better reflects our purpose. Nothing else

has changed...except the increasing acceptance of the concept of computer printing *off-line* with IBM peripherals.

We’re doing things that no one else in the industry is doing...or can do...and we don’t want our name to sound like anyone else’s. Whether you remember us as DATAFLO, or think of us as DYLAFL0, the “rose by any other name” means more efficient use of your computer.



DYLAFL0 BUSINESS MACHINES CORP.
740 South Douglas Street
El Segundo, California 90245
Phone: (213) 644-5585

OFF - LINE PRINT REQUIREMENTS

Please indicate your system requirements below.

9 TRACK. 800 BPI MAGNETIC TAPES

.....

9 TRACK. 1600 BPI MAGNETIC TAPES

.....

7 TRACK. 800 BPI MAGNETIC TAPES

.....

MAXIMUM SIZE TAPE BLOCKS--char. count

.....

ON-LINE / OFF-LINE TAPE UNIT SWITCH

.....

600 LINES PER MINUTE IBM PRINTERS

.....

1100 LINES PER MINUTE IBM PRINTERS

.....

MODEL NUMBER OF COMPUTERS USED TO

.....

CREATE PRINT TAPES

.....

.....

Mr. Charles W. Bozarth
Vice President, Marketing
DYLAFL0 Business Machines Corp.
740 South Douglas Street
El Segundo, California 90245
Telephone: 213- 644-5585

May 7, 1970

Dear Mr. Bozarth:

We saw your DYLAFL0 1 System demonstrated at the SJCC in Atlantic City. AS a result we are most interested in the capability of off-line printing with your system using IBM peripherals.

We believe the DYLAFL0 1 System can offer us.....

\$ SAVINGS through lower equipment and personnel costs,

QUALITY PRINTING with the industry STANDARD printer,

FASTER REPORTING plus reprinting without computer reruns,

GREATER FLEXIBILITY in scheduling our computer resources,

and we will not have to sacrifice the level of customer support, both sales and service, provided by IBM.

We understand your DYLAFL0 1 Peripheral Controller rents for approx. \$1000 to \$1250 per month, depending on the options ordered, and that we will obtain the IBM Magnetic Tape Unit and 1403 Printer through our normal IBM channels.

Since the initial DYLAFL0 1 Systems production already has been allocated, we would like to be identified as preferred customers for late 1970 or early 1971 equipment delivery.

Sincerely,

Name: _____

Title: _____

Company Name: _____

Address: _____

ZIP

Telephone: _____

DYLAFL0 BUSINESS MACHINES WELCOMES YOU TO SJCC AND TO THE FIRST EXHIBIT OF

[illegible]

. D Y L A F L O 1 S Y S T

	*****		*****
7 OR 9 TRACK	*		*
MAGNETIC TAPE	*	IBM 2401	*
	*		*
	*	TAPE	*
	*		*
800 BPI OR	*	UNIT	*
800 / 1600 BPI	*		*
DUAL DENSITY		*****	*****

ON-LINE / OFF-LINE.....
TAPE SWITCH -OPTIONAL- ..

OFF-LINE SYSTEM POWER SUPPLY
TAPE READ LOGICS, ERROR CHECK
OPERATOR CONTROLS, BLOCK BUFFER
PRINT LINE BUFFER, HAMMER DRIVE
FORMS CONTROL LOGICS, PRINT
SYNCHRONIZATION, ERROR CORRECTION
PRINT CHARACTER GENERATION
PLUS
OPTIONAL FEATURES FOR SPECIAL

FROM
IBM SYSTEM/360

OPTIONAL FEATURES FOR SPECIAL

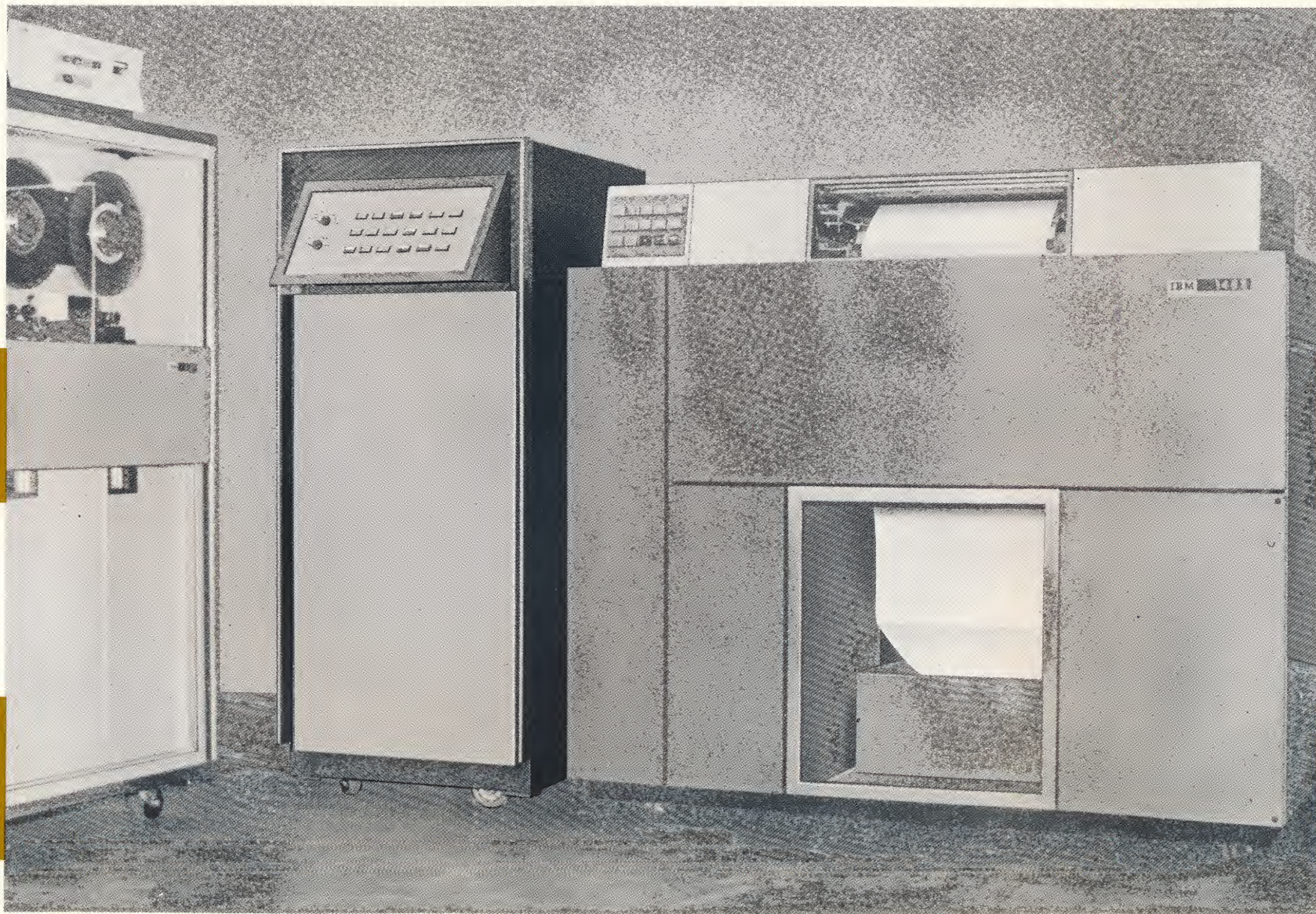
CHUCK BOZARTH, BOB GAVERT, DICK GROVE, RON KIKLAS, RAY LORENZ, MONTIE MAZO, E

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LO 1 SYSTEM

*****	*****	
DYLAFO 1	IBM 1403	* 600 OR 1100
PERIPHERAL	HIGH SPEED	* LINES PER MINUTE
CONTROLLER	PRINTER	* AN, HN, AND SN
		* INTERCHANGEABLE
		* CHARACTER SETS
*****	*****	

SYSTEM POWER SUPPLY,
 LOGICS, ERROR CHECKING,
 CONTROLS, BLOCK BUFFER,
 BUFFER, HAMMER DRIVERS,
 TROL LOGICS, PRINT TRAIN
 ZATION, ERROR CORRECTION,
 CHARACTER GENERATION,
 PLUS
 FEATURES FOR SPECIAL NEEDS





COMPANION IBM PERIPHERALS FOR DYLAFL0-1

IBM 1403 Printer

Model 2 Model 3 Model 7 Model N1

Print cycle time at single spacing msec.	100	54.5	100	54.5
Peak speed,* lines/min.	600	1100	600	1100
Speed at 1" line spacing lines/min.	480	755	480	755
Number of printing positions	132	132	120	132
Number* printable characters	48	48	48	48
Skipping speed,	33/75	33/75	33	33/75
Print mechanism	Horiz. chain	Horiz. train	Horiz. chain	Horiz. train

*Note: With AN and HN chains/trains.
The SN 84 character chain/train is also
available and interchangeable with
the AN and HN chains/trains.

IBM 2401 Tape Unit

Nine Track

Model	1/4	2/5	3/6
Tape Speed (ips.)	37.5	75.0	112.5
Density (bpi)			
NRZI	800	800	800
PE	1600 (1)	1600 (1)	1600 (1)
Max. Data Rate (bps)			
NRZI	30,000	60,000	90,000
PE (1)	60,000	120,000	180,000
Rewind Time (min.)	3.0	1.4	1.0

(1) Note: Models 4, 5 and 6 only.

Seven Track

Available with Models 1, 2, and 3, 800
bpi., NRZI only.

DYLAFLO MODELS

DYLAFLO-1 9 track 800 bpi. NRZI system.

DYLAFLO-1A 7 track 800 bpi. NRZI system.

DYLAFLO-1B 9 track 1600 bpi. PE or 1600 bpi. PE/800 bpi. NRZI dual-density systems.

STANDARD FEATURES

1024 Byte Buffer Memory: 767 bytes available for data blocks.

Vertical Format Control Codes: ASA FORTRAN, EBCDIC (IBM S/360), or BCDIC (1401).

Chain/Train: AN, HN, SN. The system accepts the characters and their sequence on these chain/trains and prints from standard EBCDIC (9 track) and 1401 (7 track) codes.

Line Overflow Ignore: Characters in excess of 132 character line length are ignored.

Block Overflow Ignore: Detects tape records longer than the size of the installed block buffer and ignores the excess characters.

Hexidecimal Tape Dump: Provides character-by-character printout of buffer block image from 9 track tape files. Each character is printed in hexidecimal representation including VFC codes.

Variable or Fixed Line Record Format: Variable line lengths are printed by recognition of a non-printing end-of-line code. Fixed records of 132 characters are printed without an end-of-line code.

Automatic Parity Retry: Detection of a vertical or longitudinal parity error initiates a tape back space and re-read.

Space Immediate and Space After Print: Treats EBCDIC (S/360) and 1401 vertical format codes in same manner as IBM S/360 DOS and TOS utility macros specs.

Out-of-Paper Print Stop: When end of form is sensed, can print last page completely, then stop.

12 Channel Vertical Format Control: Provides for skipping to one of 12 channels.

Invalid Character Translation: An invalid character is printed as a space, without slowing printer.

Invalid Vertical Format Control Character: Invalid character is interpreted as a "single space after print" code.

OPTIONAL FEATURES

Additional 1024 Byte Buffer: Provides block buffer of 1024 bytes in addition to the 767 usable byte buffer in the basic system.

Additional 3072 Byte Buffer: Provides block buffer of 3072 bytes in addition to the 767 usable byte buffer in the basic system.

On/Off Line Tape Drive Switch: For switching of the tape drive between the off-line system and the computer.

File Search Forward/Reverse: Permits rapid skipping over data files that are not to be printed by searching for a file mark.

Horizontal Tab: For moving print data to pre-set columnar positions without requiring intervening non-printed area be filled with space codes.

Automatic Page Spacing: When a punch is sensed in carriage control channel 12, the printer automatically skips to top of the next form.

Record Length Switch: Permits selection of a full range of fixed length print line records up to a maximum size of 255 characters.

80-Character Record Switch: Provides standard header and trailer label detection with 4 positions:

SKIP—Bypass label and read next block of data.

STOP—Stop on detecting a label. A manual start will read in first data block.

PRINT and STOP—When label is detected, skips to new page, prints label, then stops. Manual start will read in next block of data.

OFF—Label records are not detected for special handling.

Single — Track Error Correction:

Cyclic redundancy check on nine-track read operations for correcting most single-track readback errors.

Automatic End-of-File Rewind Key: For automatic rewind-unload whenever a file mark is sensed.

Overflow Stop Switch: System halts when print line or block overflow is detected.

Space/Skip Before Print: Treats the space immediate (don't print) vertical format codes in EBCDIC and 1401 as space before printing commands. (Standard when the ASA VFCs are ordered).

Invalid Code Stop: Upon detecting an invalid print or VFC character, the system is halted.

Data File Dump: All data characters read from tape into the buffer are printed in fixed length format. Requires Record Length Switch option.

CHARACTER SETS

"AN" chain/train
1234567890#@/STUVWXYZ,%
JKLMNOPQR-\$*ABCDEFGHI+.

"HN" chain/train
1234567890=/'STUVWXYZ&,
(JKLMNOPQRZ-\$*ABCDEFGHI+.)

"SN" Text printing (84 graphics—
78 preferred)
1234567890&./STUVWXYZ,\$*JKLMNO
PQR-':ABCDEFGHI+abcdefghijkl
mnopqrstuvwxyz@'()-!?:;□

IBM PERIPHERAL UNITS

1403 Printer, Models 2, 3, 7, N1.
2401 Tape Unit, Models 1 thru 6.



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